

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
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PCT REC'D 02 MAY 2005
WIPO PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference IC02-01		Date of mailing (day/month/year) 29 APR 2005 FOR FURTHER ACTION See paragraph 2 below	
International application No. PCT/US04/00847	International filing date (day/month/year) 13 January 2004 (13.01.2004)	Priority date (day/month/year)	
International Patent Classification (IPC) or both national classification and IPC IPC(7): B60T 1/00 and US Cl.: 188/4B; 280/757; 152/208			
Applicant FRED SMITH			

1. This opinion contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Christopher P. Schwartz <i>CP Schwartz for</i> Telephone No. 703-308-1113
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International application No.

PCT/US04/00847

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
☐ table(s) related to the sequence listing

b. format of material

- ☐ in written format
☐ in computer readable form

c. time of filing/furnishing

- ☐ contained in international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>1-20</u>	YES
	Claims <u>NONE</u>	NO
Inventive step (IS)	Claims <u>1-20</u>	YES
	Claims <u>NONE</u>	NO
Industrial applicability (IA)	Claims <u>1-20</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and explanations:

Claims 1-20 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest a chain traction system having a sealed housing which comprises input and output apertures; an electric drive motor having reversible rotational output secured to the housing and having an armature shaft extending through the input aperture; an intermediate drive shaft rotatably mounted within the sealed housing; a spring loaded clutch coupled to the intermediate drive shaft with the clutch limiting the amount of torque which may be applied to the intermediate drive shaft; a speed reduction gear train interposed between the armature shaft and the spring loaded clutch; a worm axially installed on the intermediate drive shaft; an output shaft rotatably mounted within the sealed housing and extending through the output aperture; a deployment arm coupled to a portion of the output shaft that is external to the sealed housing, the deployment arm having rotatably mounted thereto a friction drive disc, the friction drive disc having peripherally attached thereto a plurality of chain segments; a worm gear coupled to the output shaft, which meshes with the worm on the intermediate drive shaft, rotational movement of the worm imparting rotational movement to the output shaft; and a shock damper coupled to the output shaft which mitigates shock loads applied to the worm and worm gear, the shock loads associated with rotational moments of the deployment arm caused primarily by uneven road surfaces.

The prior art of record neither alone, or in combination, anticipates or renders obvious the claimed limitations in the independent claims.